for access to a slide are composed of digits from 0 to 9, then a hexadecimal coding is chosen composed of bytes which are sufficiently distinct for the projector to be able to operate reliably.

Having performed the coding, several cycles of slides are programmed in the same way and the IR signals and the command instructions are loaded directly, in the form of character strings, into the same memory **20** via the link **18**.

The operator **2** next programs the keys depending on the instructions as described above.

On the apparatus **5** side, there is provision for an IR receiver, which in this instance is a device identical to the device **1**, whose serial link is connected to the projector.

The signals received and coded then become the commands for the projector.

When the operator presses a key, he thus remotely controls, in an extremely simple, reliable and interactive way, a slide show with synchronized sound, of for example several tens of slides.

Represented in FIG. **5** is a system **50** comprising a first device according to the invention **51** or **52** furnished with infrared radiation **55** transmitter **53** and receiver **54** means.

The first device can, for example, be a cuddly animal **51** or a games table **52**. It comprises means **56** for visual interfacing (a liquid crystal screen, leds etc.) and/or means **57** for sound interfacing (loudspeaker and associated circuits).

The system comprises a second device **58** connected to or built into a remotely controllable apparatus **59**, for example either via a cabled link **60**, or directly associated with the motherboard of the apparatus.

The remotely controllable apparatus **59** is, for example, a games console **62** which contains the interactive application stored in a memory, for example CD-ROM, games cartridge etc. The console is connected to a television **63** or to a computer.

The corresponding data to the application are for example structured into two parts:

- the computational and display data which are processed within the remotely controllable apparatus **59** itself,
- the interfacing data intended to be dispatched to the first device **51** or **52**.

FIG. **6** is a simplified flowchart giving the main steps of the protocol for communication between the first device **51** or **52** and the second device **58** according to the embodiment of the invention more particularly described here.

The data and/or infrared instructions are coded as described previously and/or as described in document FR-A-2,718,553.

The protocol includes a first step **100** termed the protocol initialization step, a second step **101** termed the bidirectional communication step and the dialogue steps proper.

The first two steps **100** and **101** (shown in dashed lines in FIG. **6**) comprise the following sub-steps:

Step **100** (initialization of the protocol)

(**102**): Switching on of the remotely controllable apparatus **59** and of the second device **58**, possibly built into the remotely controllable apparatus.

(**103**): Downloading into a memory of the second device **58** of the parameters for interfacing with the first device **51** or **52**.

(**104**): Displaying (on the Television **63**) of a message requesting switching on of the first device.

(**105**): After a time equal for example to 20 seconds, if the second device receives no signal from the first device then the remotely controllable apparatus **59** transmits a sound signal and we return to step **104**.

(**106**): Transmission of an infrared code from the first device to the second device indicating that the first device is on.

(**107**): Placing of the first device into infrared reception mode.

(**108**): Transmission of an infrared code from the second device to the first device indicating that communication is established.

(**109**): Reception and validation of said code transmitted at **108** by the first device.

Step **101** (Bidirectional communication)

The communication loop between the second device and the first device is for example structured as follows:

(**110**): Placing of the first device into infrared reception mode.

(**111**) Transmission by the second device of the interfacing data.

(**112**): Reception by the first device of the interfacing data.

(**113**): If the data have not been correctly gathered, an infrared code is dispatched to the second device for re-transmission of the data and we return to step **110**.

(**114**): Processing of the data by the first device.

The steps of dialogues proper consist in controlling the first device, for example **51**, on the basis of the information sent interactively with the apparatus **59**.

For example the user (a child) inserts a cartridge entitled "cuddly bear" into the games console (remotely controllable apparatus), and sees displayed on the screen of the television the message "Hello", press your bear's tummy (step **106**).

When the child presses on the tummy he actually presses on a sensor and an infrared signal is sent to the device **58**.

The remotely controllable apparatus then prompts the display on the screen, the "first screen" of the application "cuddly bear" (step **108**). The application is for example a story in the form of an electronic book whose contents are then read by way of the first device built into the cuddly bear.

A depiction of the book on the screen is defined for example by five icons. Each of the icons indicates to the child which part of the bear to use in order to move about interactively within the book depicted on the television screen. For example, one icon indicates to the child that by pressing on the bear's eye he will be able to see the image move. A second icon enables the child to listen to a sound commentary; a third icon offers the possibility of choosing with respect to a given question and of confirming his answer; finally the fourth and fifth icons make it possible to move around within the book.

For example, on the right-hand page of the book may be seen three menus corresponding to three questions asked of the child. When the child presses on a sensor, for example the bear's nose, he causes a menu No. **2** to light up indicating that he has chosen answer No. **2**; if he then presses on the bear's tummy he will thus confirm the answer, otherwise he can press on another sensor (for example the arm) to return to menu No. **1** or else once again on the nose in order to select menu No. **3** etc.

What is claimed is:

1. A device for interfacing between a user and a programmable apparatus which can be remotely controlled by infrared radiation, comprising:

a box of small size including

a) data storage means,

b) means for remote control of the apparatus including means for transmitting infrared signals on the basis of data stored in said data storage means, and

c) means for communicating with an external unit for programming said means for remote control, said